

### **REMARKS**

In response to the Final Office Action mailed April 4, 2007, Applicant respectfully requests reconsideration and continued examination. The Examiner rejected claims 15-22 and 27-30 under 35 U.S.C. § 101, claims 1-3, 4-6, 8-17, 19-24, and 26-32 under 35 U.S.C. § 102, and claim 7 under 35 U.S.C. § 103. Claims 18 and 25 were cancelled by a previous amendment. Claims 1-17, 19-24, and 26-32 remain pending of which claims 1, 8, 15, 23, and 27, are independent. By this amendment, Applicants amend claims 1, 8, 15, 23, and 27 to further clarify Applicant's invention or to make the claims suitable for allowance. Accordingly, no new matter has been introduced by these amendments.

#### **Rejections Under 35 U.S.C. § 101**

The Examiner rejected claims 15-22 and 27-30 under 35 U.S.C. § 101 as being directed to non-statutory subject matter. See Office Action at 2-3. While Applicant disagrees with the Examiner's reasoning, to further prosecution, Applicant has amended independent claims 15 and 27 in the manner suggested by the Examiner. See Office Action at 16 and 17. Claim 15 has been amended to recite "a means for generating the overall snapshot object," and claim 27 has been amended to recite "...a computer readable storage medium." In view of these amendments, the rejection under 35 U.S.C. § 101 of claims 15 and 27, as well as the rejection of claims 16-22 and 28-30, which depend therefrom, should be withdrawn.

#### **Rejections Under 35 U.S.C. § 102**

In the Office Action, claims 1-3, 4-6, 8-17, 19-24, and 26-32 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent 6,981,114 by Wu et al. ("Wu"). See Office Action at 3. Applicant respectfully traverses the rejection under 35 U.S.C. § 102(e) as anticipated by Wu. To properly establish that Wu anticipates Applicant's

claimed invention under 35 U.S.C. § 102, each and every element of each of the claims in issue must be found, either expressly described or under principles of inherency, in that single reference. Furthermore, “[t]he identical invention must be shown in as complete detail as is contained in the ... claim.” See M.P.E.P. § 2131, quoting *Richardson v. Suzuki Motor Co.*, 868 F.2d 1126, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989).

Wu does not disclose each and every element of Applicants’ claimed invention. Specifically, Wu does not disclose the feature recited in claim 1, “identifying a virtual volume comprising a plurality of objects defining a mapping to data in at least one storage device, wherein each one of the plurality of objects defining the mapping corresponds to a different portion of the virtual volume, and wherein the plurality of objects defining the mapping are distributed across more than one processor in a virtualization layer between at least one host and the at least one storage device.”

The Office Action analogizes the original volume of Wu with Applicant’s “objects defining a mapping to data in at least one storage device,” which Applicant maintains is not analogous. See Office Action at 4 (citing to Wu’s “original volume may correspond to... a portion of one or more logical volumes...” as disclosing Applicant’s “each one of the objects corresponds to a portion of the virtual volume”). Indeed, as noted in the Office Action at page 4, Wu discloses that “an original volume may correspond to a portion of one or more logical volumes.” *Id.* However, Wu’s “original volume” is the physical storage device itself. See Wu at Col. 4 lines 31-33 (“the term volume manager broadly refers to host software that selects and combines storage space from more than one physical storage device into a logical volume.”) and Wu at Col. 4 lines 52-55 (“The

original volume may correspond to one or more logical volumes...”). The physical volume of Wu therefore does not constitute “a mapping to data in at least one storage device” as recited in claim 1. While Wu discloses virtualization, which must have some mapping to data in storage devices, Wu nowhere discloses how the mapping is accomplished (such as with “objects defining a mapping,” as recited in claim 1) or where the objects might be located (“the plurality of objects defining the mapping are distributed across more than one processor in the virtualization layer,” as recited in claim 1).

According to the passages in Wu cited in the Office Action at page 4, Wu merely discloses that a physical volume can be part of one or more virtual volumes. Wu does not disclose “a virtual volume comprising a plurality of objects defining a mapping to data in at least one storage device, wherein each one of the plurality of objects defining the mapping to data in at least one storage device corresponds to a different portion of the virtual volume,” as recited in claim 1. *Id.*

Additionally, in the Office Action, the analogy Wu to appears to confuse “objects defining a mapping to data in at least one storage device” with snapshots. See *e.g.* Office Action at 4 (“Therefore, it is clear that snapshots (objects) are distributed across more than one processor.”). Applicant respectfully refers to FIG. 7B of the instant Application, which shows an exemplary embodiment of “objects defining a mapping” (i.e. T1 partitioning object 270, T2 striping object 705, etc.). Each of Applicant’s snapshots “comprises a point-in-time copy of the data in the portion of the virtual volume,” as recited in claim 1, and are separate elements in claim 1 from “objects defining a mapping to data in at least one storage device.” By treating “objects” as

“snapshots,” the Office Action does not show that Wu discloses “identifying a virtual volume comprising a plurality of objects defining a mapping to data in at least one storage device, wherein each one of the plurality of objects defining the mapping corresponds to a different portion of the virtual volume, and wherein the plurality of objects defining the mapping are distributed across more than one processor in a virtualization layer between at least one host and the at least one storage device,” as required by claim 1.

Where Wu does not disclose each and every element of claim 1, Wu cannot anticipate claim 1. Independent claims 8, 15, 23, and 27 recite similar elements wherein the objects defining the mapping to data are distributed across more than one processor and wherein an overall snapshot of the virtual volume is generated from the set of partition snapshots. For at least the reasons stated herein with respect to claim 1, claims 1, 8, 15, 23, and 27 are patentably distinct from Wu and the rejection under 35 U.S.C. § 102 should be withdrawn as well as the rejection of claims 2-3, 4-6, 9-14, 16-17, 19-22, 24, 26, and 28-32 which derive therefrom.

#### **Rejections Under 35 U.S.C. § 103**

In the Office Action, the Examiner rejected claim 7 as being unpatentable over Wu in view U.S. Patent No. 6,173,293 by Thekkath et. al. (“Thekkath”) under 35 U.S.C. § 103(a).

To establish a *prima facie* case of obviousness, the prior art (separately or combined) must teach or suggest all the claim limitations. See M.P.E.P. § 2142, 8th Ed., Rev. 5 (August 2006). As demonstrated in the foregoing arguments with respect to claim 1, Wu does not disclose or suggest all of the elements of claim 7, namely,

“identifying a virtual volume comprising a plurality of objects defining a mapping to data in at least one storage device, wherein each one of the plurality of objects defining the mapping corresponds to a different portion of the virtual volume, and wherein the plurality of objects defining the mapping are distributed across more than one processor in a virtualization layer between at least one host and the at least one storage device.”

Thekkath does not make up for the deficiencies of Wu because Thekkath also nowhere discloses or suggests these elements.

For at least these reasons, Wu is not combinable with Thekkath to disclose or suggest each element of claim 7 and the rejection under 35 U.S.C. § 103 should be withdrawn.

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

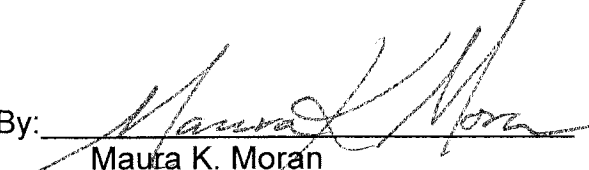
Respectfully submitted,

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